

January 18, 2022

Forrest Buffington
Attorney at Law
Barber & Borg, LLC
Navajo Injury Law Center
6240 Riverside Plaza Lane NW, Suite 250
Albuquerque, NM 87120

RE: Minnie Taylor as Personal Representative to the Estate of Louie Taylor, and Harold Cuthair vs United States of America

Dear Mr. Buffington:

I, Virginia E. Harvey, MD am a physician licensed to practice medicine in the state of New Mexico. I am Board Certified in Emergency Medicine by the American Board of Emergency Medicine. I actively practice Emergency Medicine. Further details regarding my professional activities are provided in my curriculum vitae.

I have reviewed the following records:

1. Autopsy Report completed by University of New Mexico (UNM), School of Medicine, Office of the Medical Examiner, Forensic Pathologist Satish Chundru, Case #2020-01405
2. NMS Labs Toxicology Report for Louie Dean Taylor, Issued 03/20/2020
3. State of New Mexico Certificate of Death for Louie Dean Taylor, Filed March 11, 2020
4. U.S. Department of Interior, Bureau of Indian Affairs, In Custody Death Investigation, Case Number I20000058, SUMMARY OF FACTS
5. NNDOC Medical Screening Form filled out by CO Ariel Lauing-Simms
6. NNMC Medical Records, Health Summary and Emergency Room Treatment for Louie Taylor on March 1, 2020.

This report serves to answer the following question:

1. Given the amount of amphetamine and methamphetamine found in Mr. Taylor's system noted on the Toxicology Report, could Mr. Taylor have been saved if he received timely medical intervention?

This is a report based on my review of the medical records and documents available to me at the time. I reserve the right to amend this report if any additional information becomes available. My opinions are based on my knowledge, skill, education, training, and experience in the field of Emergency Medicine, as well as published scientific literature, medical literature, government websites, database searches, books, and articles.

SUMMARY OF EVENTS

On February 29, 2020 around 7:48 p.m., a sergeant from the Navajo Nation Division of Public Safety (NNDPS) was dispatched to a residence regarding a male who was "acting in a disorderly manner." This male, identified as Louie Taylor, proceeded on foot to Northern Navajo Medical Center (NNMC) where he was found to be "banging on the windows," at NNMC. Mr. Taylor was detained at approximately 8:17 p.m. and transported to the Shiprock Adult Detention Center. During this time, he was reported to have been stating that "aliens were coming for him."

On February 29, 2020 at around 8:33 p.m., Mr. Taylor was booked into the Shiprock Adult Detention Center where the intake officer noted he was “under the influence of drugs.” He was described during the interaction as “compliant but loud,” and continued to state he was “seeing aliens and they were coming to get him.”

Mr. Taylor was placed into a solitary isolation cell, during which time he was displaying “abnormal behavior by kicking, punching and pacing in a circle in the cell.” Mr. Taylor was periodically observed throughout the evening and was noted to be “yelling and pacing in his cell.”

On March 1, 2020 at approximately 12:05 a.m., Mr. Taylor was found unresponsive in his cell. CPR was initiated and the Navajo Nation Emergency Medical Services (NNEMS) was contacted. Mr. Taylor was subsequently transported to NNMC where resuscitative efforts were unsuccessful.

On March 2, 2020, Dr. Satish Chundru of the Office of the Medical Examiner performed an autopsy on Mr. Taylor. This autopsy revealed “injuries to the extremities (contusions and abrasions), resuscitation injuries (two rib fractures and skin abrasions,) moderate pulmonary edema, and absent gallbladder.” A toxicology report for Mr. Taylor revealed the following positive findings:

Compound	Result	Units	Matrix Source
Caffeine	Positive	mcg/mL	Femoral Blood
Amphetamine	260	ng/mL	Femoral Blood
Methamphetamine	690	ng/mL	Femoral Blood
Amphetamines	Presumptive Positive	ng/mL	Urine

Based on this information, Dr. Chundru determined Mr. Taylor’s cause of death was “toxic effects of methamphetamine.”

DISCUSSION

Methamphetamine is a Drug Enforcement Administration (DEA) Schedule II drug as defined by its high potential for severe psychological and physical dependence with very narrow therapeutic indications.¹ It has numerous mechanisms of action, but the overall result is to enhance the release and block the reuptake of certain neurotransmitters (particularly norepinephrine, epinephrine, serotonin, and dopamine) resulting in various stimulant, euphoric, and hallucinogenic effects.²

¹ Drug scheduling. DEA. (n.d.). Retrieved January 19, 2022, from <https://www.dea.gov/drug-information/drug-scheduling>

² Cline, David, et al. “Chapter 187: Cocaine and Amphetamines.” *Tintinalli’s Emergency Medicine: A Comprehensive Study Guide*, McGraw-Hill Education, New York, NY, 2020.

Clinical features of patients suffering from acute methamphetamine toxicity include sweating, high blood pressure (hypertension), fast heart rate (tachycardia), agitation, and psychosis.³ Mr. Taylor's toxicology report, his reported hallucinations, and his reported abnormal behavior in the Shiprock Adult Detention Center, including "kicking, punching, and pacing" in his cell are consistent with acute methamphetamine toxicity.

Patients who present for treatment of moderate to severe methamphetamine toxicity are typically evaluated for one or more of many potentially life-threatening complications, which include, but are not limited to, elevated body temperature (hyperthermia), seizures, strokes, abnormal heart rhythms, heart attacks, damage to major blood vessels, severe hypertension, kidney failure, and electrolyte abnormalities.^{2,4} After control of agitation and hyperthermia, typically with sedating medications, as needed, further assessments include measurements of vitals signs (heart rate, blood pressure, respiratory rate, oxygen saturation, and body temperature), and also a patient history, if obtainable, and a physical exam. Based on information obtained in the initial assessment, the treating physician may obtain an EKG and/or a series of laboratory and radiological studies. These tests and evaluations are often necessary to alert the physician to severe and treatable complications arising from acute methamphetamine toxicity and allows the physician to provide such treatment, which may include hydration, control of agitation, initiation of dialysis, management of hyperthermia, treatment for cardiac arrhythmias, and respiratory support, among others.

Mr. Taylor's cause of death was listed as "toxic effects of methamphetamine." Based on his toxicology report, the concentration of methamphetamine found in a postmortem sample of femoral blood was 690 ng/mL; the concentration of amphetamine (which is a metabolite of methamphetamine) found in a postmortem sample of femoral blood was 260 ng/mL. Deaths resulting from methamphetamine toxicity have been reported at widely varying postmortem blood concentrations, with one source listing values anywhere from 90 ng/mL to 64,000 ng/mL.⁵ However, there are many variables that complicate interpretation of postmortem drug concentrations, including the presence of underlying medical co-morbidities and the effects of habituation. Acute intoxication with methamphetamine also predisposes users to violent and irrational behavior and these mortality-related blood concentrations significantly overlap with concentrations from decedents in whom the manner of death was drug-related (for example, death by traumatic injury) rather than death caused by toxic effects of the drug itself.⁶ They also overlap with identified blood concentrations of recreational methamphetamine users and of

³ Boyer, Edward W, and Christina Hernon. "Methamphetamine: Acute Intoxication." Edited by Stephen J Traub et al., *UpToDate*, 24 Dec. 2019, https://www.uptodate.com/contents/methamphetamine-acute-intoxication?search=methamphetamine&source=search_result&selectedTitle=3~131&usage_type=default&display_rank=2.

⁴ White SR. Amphetamine toxicity. *Semin Respir Crit Care Med.* 2002 Feb;23(1):27-36. doi: 10.1055/s-2002-20586. PMID: 16088595.

⁵ "Toxicology." *N.C. OCME Toxicology*, <https://www.ocme.dhhs.nc.gov/toxicology/index.shtml>.

⁶ Logan BK, Fligner CL, Haddix T. Cause and manner of death in fatalities involving methamphetamine. *J Forensic Sci.* 1998 Jan;43(1):28-34. PMID: 9456521.

patients who have survived severe methamphetamine overdoses.^{7,8} It is therefore very difficult to attempt to correlate postmortem blood concentrations with a likelihood of death due to toxic effects alone. Understanding these limitations, if one were to compare the concentration of methamphetamine found in Mr. Taylor's postmortem femoral blood (690 ng/mL) to published concentrations that are expected to result in coma or death, Mr. Taylor's values would fall below the lower limit of this range (1000 ng/mL).⁹ Therefore, while Mr. Taylor was clearly suffering the toxic affects of methamphetamine, made most obvious at the time by his clinical presentation, his post mortem femoral blood concentrations were not exceptionally high as to suggest a unsurvivable overdose and he likely could have been saved by timely medical intervention.

OPINIONS

In summary, on February 29, 2020, Mr. Taylor appeared to be suffering from moderate to severe methamphetamine toxicity including significant psychomotor agitation, hallucinations, and paranoia. Patients who suffer acute methamphetamine toxicity are at risk for several life-threatening, yet largely treatable, complications. These include, but are not limited to, severe hypertension, stroke, vascular injury, seizures, severe electrolyte derangements, cardiac arrhythmias, heart attacks and kidney failure. From the documentation provided, Mr. Taylor had no significant medical co-morbidities and there were no findings on his autopsy that would suggest an unsurvivable co-condition. Additionally, and notwithstanding limitations in the interpretation of postmortem blood concentrations for toxic substances, Mr. Taylor's femoral blood concentration of methamphetamine was not exceptionally high as to suggest an unsurvivable overdose. It is therefore my medical opinion to a reasonable degree of medical certainty that had Mr. Taylor been afforded timely and appropriate medical care, it is likely the toxic effects of methamphetamine could have been discovered and treated, thereby preventing his death.

Respectfully,

Virginia E. Harvey, MD

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⁷ A.W. Jones, A. Holmgren, Concentration Ratios of Methamphetamine to Amphetamine in Blood Can Help to Distinguish Use of Methamphetamine from Various Mixtures of the Two Stimulants, *Journal of Analytical Toxicology*, Volume 36, Issue 9, November/December 2012, Pages 634–637, <https://doi.org/10.1093/jat/bks075>

⁸ Kashani, J., & Ruha, A. M. (2004). Methamphetamine toxicity secondary to intravaginal body stuffing. *Journal of Toxicology: Clinical Toxicology*, 42(7), 987–989. <https://doi.org/10.1081/clt-200042554>

⁹ Schulz, M., Schmoldt, A., Andresen-Streichert, H. et al. Revisited: Therapeutic and toxic blood concentrations of more than 1100 drugs and other xenobiotics. *Crit Care* 24, 195 (2020). <https://doi.org/10.1186/s13054-020-02915-5>